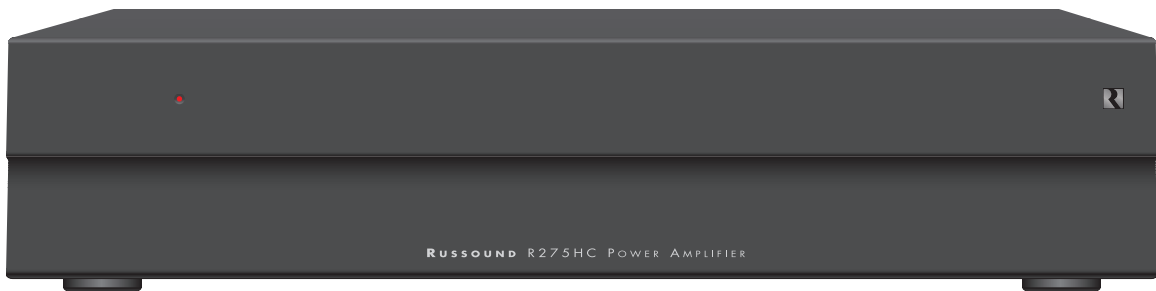




R-Series  
R275HC  
2-Channel  
Power Amplifier

User's Manual



## IMPORTANT SAFEGUARDS



**“WARNING”** “ TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.”

**“CAUTION”** “ TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER - SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## SAFETY INSTRUCTIONS

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the appliance in the operating instructions should be adhered to.
4. Follow Instructions - All operating and user instructions should be followed.
5. Water and Moisture - Do not use this appliance near water, for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool. Do not expose the appliance to dripping or splashing, and do not place on the appliance objects filled with liquids such as vases. Do not touch the amplifier with wet hands. Do not handle the amplifier or power cord when your hands are wet or damp. If water or any other liquid enters the amplifier cabinet, take the amplifier to qualified service personnel for inspection.
6. Cleaning - The appliance should be cleaned only as recommended by the manufacturer. From time to time you should wipe off the front and side panels and the cabinet with a soft cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since this may damage the finish or remove the panel lettering.
7. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings or, placed in a built - in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings. Place the unit in a well-ventilated location, leaving at least 2 inches (5 cm) of clearance on all sides, top and rear of unit for air flow. If ventilation is blocked, the unit may overheat and malfunction.
8. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances ( including amplifiers ) that produce heat.
9. Grounding or Polarization - Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.
10. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, receptacles, and the point where they exit from the appliance.
11. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
12. Main Power Disconnect - The power switch is a single-pole switch. When the switch is in the “Off” position, the appliance is not completely disconnected from the main power. The main power plug is used as the disconnect device and shall remain readily operable. When installing the product, ensure that the plug is easily accessible.
13. Non-use Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
14. Attachments - Only use attachments/accessories specified by the manufacturer.
15. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force and uneven surfaces may cause the appliance and cart combination to overturn.
16. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
17. Location of the Amplifier - Do not mount this unit under a kitchen cabinet. Do not expose the amplifier to direct sun light or heating units as the amplifier internal components' temperature may rise and shorten the life of the components. Avoid damp and dusty places.
18. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through the openings.
19. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
20. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:
  - A. The power - supply cord or the plug has been damaged; or
  - B. Objects have fallen, or liquid has been spilled into the appliance; or
  - C. The appliance has been exposed to rain; or
  - D. The appliance does not appear to operate normally; or
  - E. The appliance has been dropped or the enclosure is damaged.



## R275HC AMPLIFIER

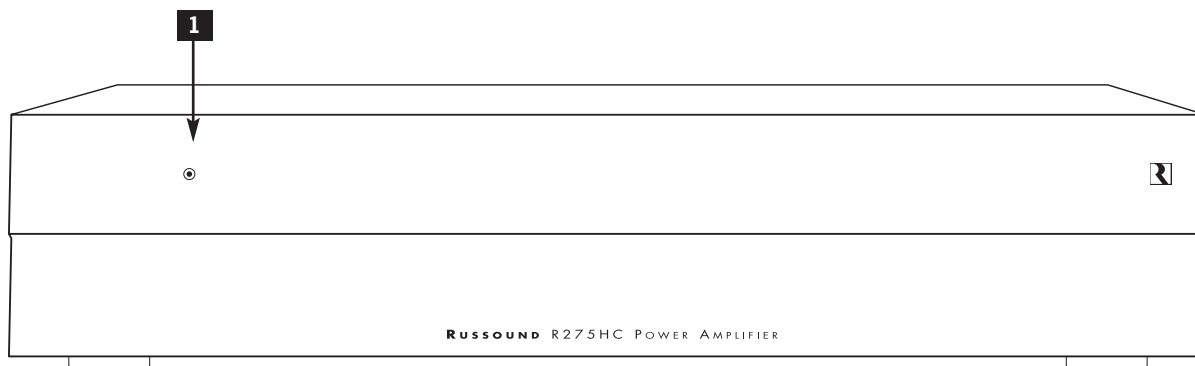
### INTRODUCTION

The Russound R275HC is a 2-channel high-current power amplifier capable of driving low impedance loads and incorporates selectable volume control protection circuitry.

This amplifier can be used for power upgrades in specific zones, for large speaker selector or volume control systems and for long series-parallel speaker runs (e.g., large outdoor zones).

The R275HC is rated at 75 watts per channel into 8 ohms and 100 watts into 4 ohms. With the Stereo/Bridge Mono switch in the Bridge Mono position, both amplifier channels are combined for a higher powered mono output. In Bridge mode the R275HC is rated at 200 watts of power into a single 8-ohm load. All this power is backed by a high output toroidal transformer. Each amplifier output channel incorporates robust protection circuitry for safety and reliability under extreme circumstances.

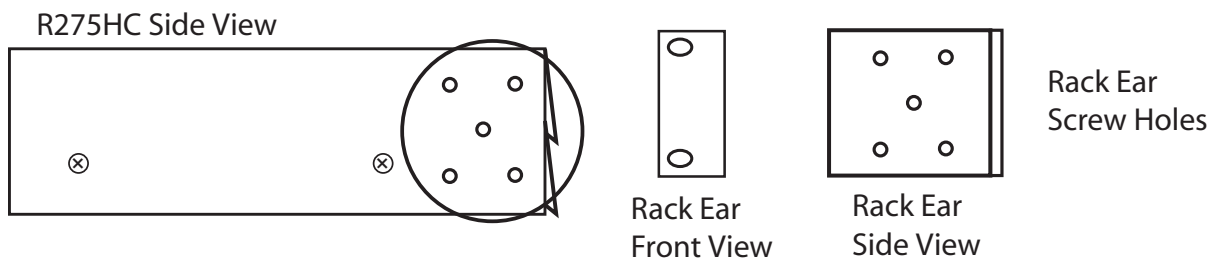
### FRONT PANEL



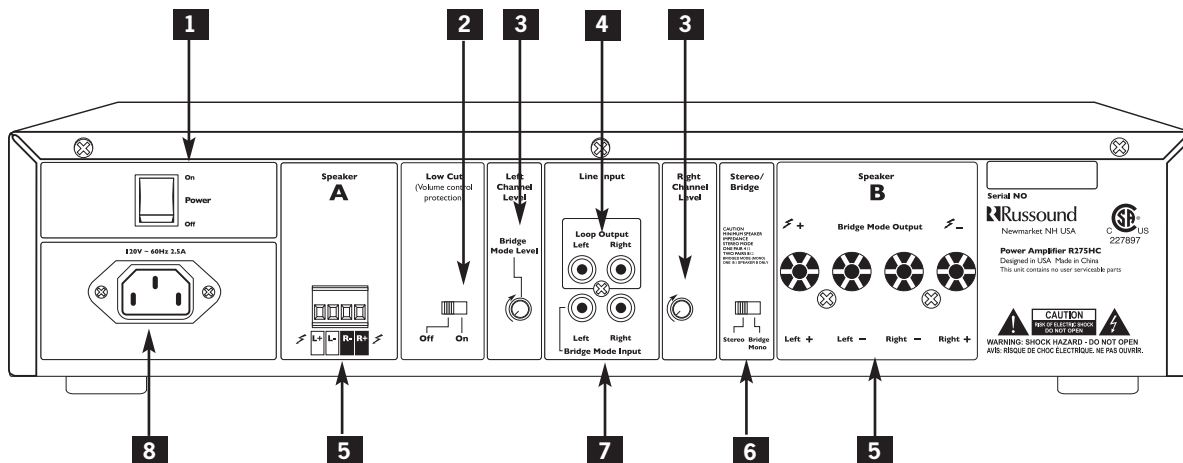
- 1 Tri-color Indicator LED:** The LED will illuminate red when the power is on and the amplifier is in standby, green when the amplifier is active and orange when in short circuit protection.

### RACK MOUNTING

The R275HC amplifier can be rack mounted using the included rack-mount ears and hardware to attach the ears to the amplifier. The amplifier will take 2 rack spaces with the feet removed.



## R275HC AMPLIFIER



- 1 Power Switch:** Turns the amplifier on/off. This switch does not disconnect the main power feed from the amplifier; this requires that the power cord be unplugged from the outlet.
- 2 Low Cut (High Pass) Switch:** Enables/disables the filter that reduces very low frequency energy and protects autoformer-based volume control/speaker selectors. When "on," the filter is set to -3dB at 40 Hz. When off, the frequency response is flat from 20Hz to 20kHz.
- 3 Gain Controls:** Left and Right gain controls independently adjust the sound level for each channel. When used in the bridged mode only the Left control is used.
- 4 Loop Output:** The loop output is a passive passthrough of the line input. These jacks can be used to daisy chain the input signal to another amplifier in the system.
- 5 Speaker A/B Outputs:** The A and B speaker outputs are in parallel to the amplifier output. The minimum load in stereo mode is 4 ohms. This can be used to drive up to 2 pairs of 8-ohm speakers or 1 pair of 4-ohm speakers. The minimum load impedance for bridged mode operation is 8 ohms, Speaker B only.
- 6 Stereo/Bridge Mono Switch:** Sets the pair of amplifier channels for stereo or bridge mono operation.
- 7 Line Input:** The line audio input is a sensing input that will activate the amplifier when an audio signal from a source is present. When there is no audio the zone will go into standby. The Left input is used for bridged mono operation only.
- 8 AC Input:** The AC voltage input for the North American model is 120VAC at 60Hz (for the European model, 230VAC at 50Hz). This receptacle accepts a 3-prong IEC 320 type connector. A detachable 3-terminal power cord is included.

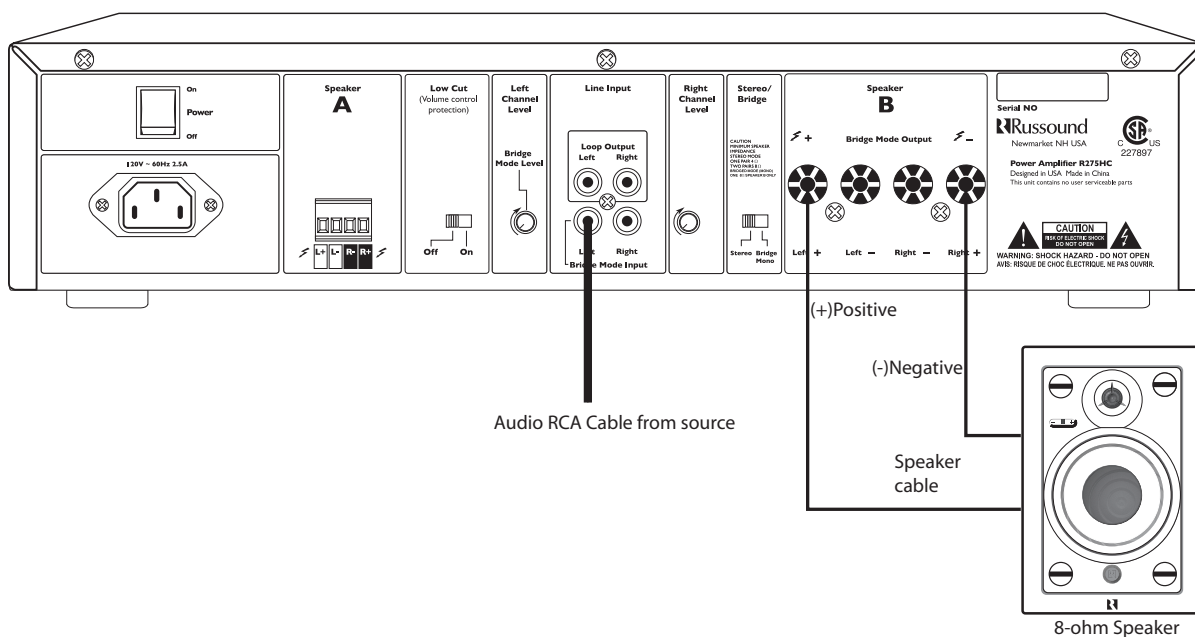
## R275HC AMPLIFIER

### BRIDGED OPERATION

When the amplifier is in Bridged mode operation, both the left and right channels are combined for a higher power mono output.

For bridged amplifier operation, turn off the power to the amplifier and connect an 8-ohm minimum load to the Speaker B output.

Following the Bridge mode markings in red on the back of the amplifier: Connect the negative lead (-) of the speaker cable to the R+ terminal. Connect the positive lead (+) of the speaker cable to the L+ terminal. Set the Stereo/Bridge Mono switch to Bridge Mono, connect the Line In feed from a source to the Left Line In connection and restore power to the amplifier.



### THERMAL PROTECTION

All Russound amplifiers are designed with special circuitry to safeguard the amplifier under a thermal overload condition. Thermal protection mode can only engage when the unit has been run at high volume for extended periods of time without adequate ventilation and/or when speaker impedances are below the minimum levels for the amplifier. If this fault occurs, turn off the amplifier, and check that the speaker impedance rating is above the minimum rating. Also check for adequate ventilation around the amplifier and make adjustments if necessary. Once the unit has cooled to safe operating temperatures, the amplifier may be powered back on.

### PROTECTION CIRCUITRY

All Russound amplifiers are designed with special circuitry to safeguard the amplifier under a short-circuit condition. A faulty speaker can also cause a short circuit condition.

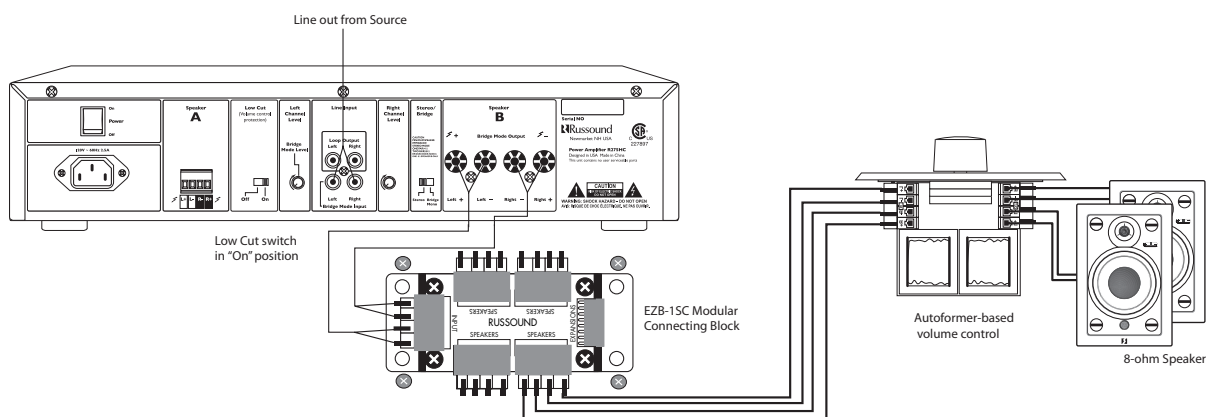
The front panel LED illuminates orange when the amplifier is in short circuit protection. If this fault condition occurs, turn off the amplifier and check speakers for short circuit conditions when appropriate.

## R275HC AMPLIFIER

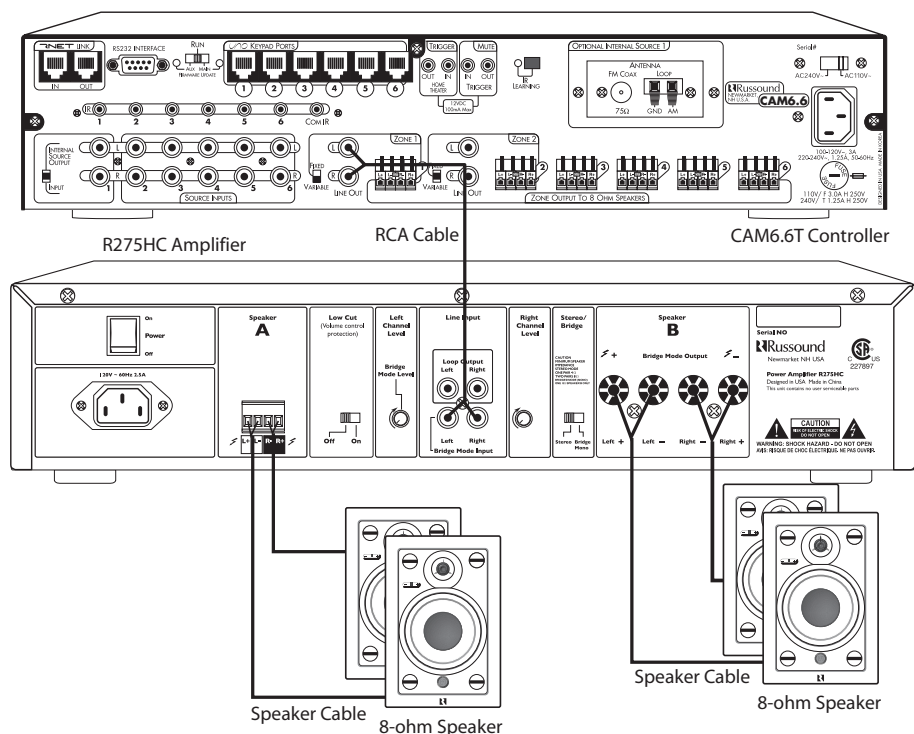
### POSSIBLE SYSTEM CONFIGURATIONS

The R275HC can be configured for large autoformer-based volume control systems/speaker selectors. When using the R275HC for this application, set the Low Cut switch to the "On" position. Turning this filter "on"

enables a filter that reduces the low frequency energy which protects the volume controls/speaker selectors and increases the efficiency of the system.



The R275HC can also be configured as a power upgrade for specific zones, for use with large speaker selectors and for long series-parallel speaker runs (e.g., outdoor zones).





## SPECIFICATIONS

<b>Stereo Continuous Output Power:</b>	75W per channel at 8 ohms 100W per channel at 4 ohms
<b>Bridged Output Power:</b>	200W at 8 ohms, 2 channels bridged
<b>THD+N:</b>	<0.05% from 20Hz to 20kHz
<b>Signal-to-Noise Ratio:</b>	>100dB A-weighted
<b>Frequency Response:</b>	20Hz to 20KHz +/- 0.3dB
<b>Input Sensitivity:</b>	70mV for 1W at 8 ohms 610mV for 75W at 8 ohms
<b>Input Impedance:</b>	47kohms Line Input
<b>Voltage Gain:</b>	32dB
<b>Power Requirements:</b>	<b>North American Model:</b> 120VAC 60Hz 2.5A IEC 320 type connector with 3 terminal detachable power cord.
<b>Power Requirements:</b>	<b>European Model:</b> 230VAC 50Hz 1.2A IEC 320 type connector with 3 terminal detachable power cord.
<b>Dimensions:</b>	17" W x 14"D x 4.125"H (43 x 35.5 x 10.5 cm)
<b>Weight:</b>	20.3lbs. (9.2kg)

## WARRANTY

The Russound R275HC is fully guaranteed for two (2) years from the date of purchase against all defects in materials and workmanship. During this period Russound will replace any defective parts and correct any defect in workmanship without charge for either parts or labor. For this warranty to apply, the unit must be installed and used according to its written instructions. If service is necessary, it must be performed by Russound. The unit must be returned to Russound at the owners expense and with prior written permission. Accidental damage and shipping damage are not considered defects under the terms of the warranty. Russound assumes no responsibility for defects resulting from abuse or servicing performed by an agency or person not specifically authorized in writing by Russound. Damage to or destruction of components due to improper use voids the warranty. In these cases the repair will be made at the owners expense. To return for repairs, the unit must be shipped to Russound at the owners expense, along with a note explaining the nature of the service required. Be sure to pack in a corrugated container with at least 3 inches of resilient material to protect the unit from damage in transit.

Russound sells products only through authorized Dealers and Distributors to ensure that customers obtain proper support and service. Any Russound product purchased from an unauthorized dealer or source, including retailers, mail order sellers and online sellers will not be honored or serviced under existing Russound warranty policy. Any sale of products by an unauthorized source or other manner not authorized by Russound shall void the warranty on the applicable product.



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